Indian Knowledge System and NEP 2020: A Study on Integration and Sustainability

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ABSTRACT

The Indian Knowledge System (IKS) and the National Education Policy (NEP) 2020 together create a framework for sustainability rooted in tradition, innovation, and inclusivity. IKS involves the transmission of knowledge across generations, primarily through structured systems like the Vedic literature, which includes the Upanishads, Vedas, and Upvedas. It emphasizes the interconnectedness of life, viewing nature as divine, with plants like Neem, Tulsi, and Peepal worshipped and promoting planting. Historically, India has been a hub of knowledge, home to renowned universities such as Nalanda, Takshashila, and Magadh. IKS, derived from experience, observation, experimentation, and analysis, focuses on sustainable development. This paper examines IKS's role in sustainability to support the idea of one earth, one family, and one future.

Keywords: Indian Knowledge System, Upanishads, Vedas, and Upvedas

INTRODUCTION

India's educational and cultural landscape is undergoing a significant transformation with the convergence of the Indian Knowledge System (IKS) and the National Education Policy (NEP) 2020. This study reveals that IKS, with its focus on harmony, balance, and moral living, provides enduring principles that align with modern sustainability goals. By incorporating this indigenous wisdom into mainstream education, NEP 2020 revitalizes India’s intellectual heritage and empowers learners to tackle today's global challenges.

As humans, we have a natural ability to create knowledge, and our unique skills make us stand out. The Indian Knowledge System is a broad and complex field that covers many areas, including archaeology, Ayurveda, medicine, astrology, astronomy, public administration, economics, and more.

It's not just about acquiring knowledge but also about understanding its role in fostering economic, social, and global growth. The terms “Indian Knowledge” and “sustainable development” are closely linked, with various definitions and interpretations. For a long time, we've followed Macaulay’s English education system, which has disconnected us from our roots and caused issues. This paper analyses the concept of sustainable development established by the Indian education system, focusing on preventing the overexploitation of natural resources and promoting the well-being of the Earth.

Indian Knowledge System (IKS): A Sustainable Heritage

IKS refers to the vast reservoir of indigenous wisdom developed over millennia. IKS is inherently sustainable, and it values balance, minimalism, and reverence for life required

- Ayurveda and Yoga: Promoting holistic health and well-being
- Vedic Mathematics and Astronomy: Encouraging intellectual rigor and scientific inquiry
- Ecological Ethics: Embedded in texts like the Vedas and Upanishads, emphasizing harmony with nature
- Crafts and Architecture: Sustainable design principles in temple architecture, water harvesting, and metallurgy

NEP 2020: REDESIGNING EDUCATION FOR A SUSTAINABLE FUTURE

India's rich history of knowledge is acknowledged in the NEP 2020. The Indian Knowledge Systems (IKS) are regarded as scientific, blending tribal expertise with traditional learning methods. These systems encompass a wide range of topics, including math, astronomy, philosophy, yoga, architecture, medicine, agriculture, and more. Other important areas include tribal ethno-medical practices, forest management, natural farming, and related practices. Traditionally, 18 major vidyas, or theoretical disciplines, and 64 kalas, or applied and vocational disciplines, are recognized. The 18 vidyas include the four Vedas, four subsidiary Vedas (such as Ayurveda, Dhanurveda, Gandharvaveda, and Silpa), Purana, Nyaya, Mimamsa, Dharmasastra, and Vedanga—the six auxiliary sciences of phonetics, grammar, astronomy, ritual, and philology. These formed the foundation of the 18 sciences in ancient India. Regarding applied sciences, there are various lists of 64, but the concept of sustainable development remains a key focus. This type of development satisfies current needs without harming the ability of future generations to meet their own needs. Sustainable development also emphasizes addressing environmental issues and climate change.

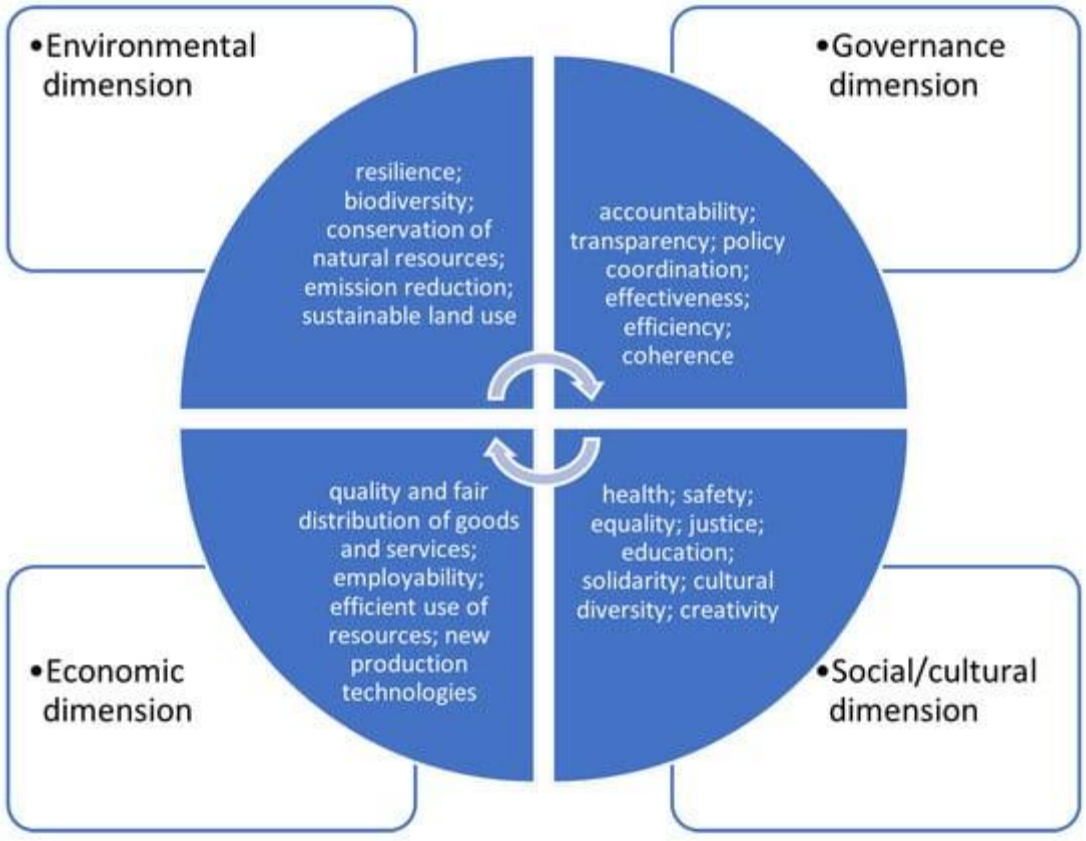
The NEP 2020 aims to incorporate IKS into mainstream education. This policy change is intended to develop globally conscious yet locally connected citizens.

- Curriculum Revamp: Incorporating traditional knowledge systems into subjects like science, arts, and philosophy
- Multidisciplinary Learning: Promoting students to study ancient wisdom together with modern fields
- Local Contexts: Encouraging regional languages and indigenous customs to protect cultural heritage
- Values-Based Education: Promoting ethics, empathy, and environmental awareness.

SUSTAINABILITY DIMENSIONS IN IKS AND NEP 2020

This study demonstrates in Table-01 that ancient Indian wisdom aligns with several UN Sustainable Development Goals (SDGs), particularly SDG 3: Good Health and Well-being, SDG 4: Quality Education, and SDG 12: Responsible Consumption and Production.

Pillar of Sustainability	Contribution from IKS & NEP 2020
Environmental	Traditional farming, water conservation, and ecological rituals
Economic	Revival of local crafts, sustainable livelihoods, and entrepreneurship
Social	Inclusive education, gender equity, and community-based learning
Human	Mental wellness through yoga, moral education, and lifelong learning



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Research objective

- To examine the role of the Indian knowledge system in sustainable development.
- To understand the reason for integrating the Indian knowledge system into our education system

RESEARCH DESIGN

This study is based on existing data and relies on a variety of sources, including books, journals, online materials, newspapers, and personal collections. The data collected helped achieve the study's goals. Although a lot of relevant information is available online, this paper concentrates on the most essential points, including the author's own experience and expertise, which also play a role in this paper.

RESULTS AND DISCUSSION

India has a rich history of civilization, unlike the rest of the world, which was once viewed as uncivilized. Sustainability is a concept that's been around in India for some time. We explore the four key pillars of sustainability: human, social, economic, and environmental. These pillars provide a comprehensive approach to finding a lasting balance between human progress and the health of the planet. By adding a stronger focus on people and communities, they build on the traditional "three pillars" framework.

INDIAN KNOWLEDGE SYSTEM [IKS] AND HUMAN SUSTAINABILITY

Human sustainability focuses on preserving and enhancing the human resources in our society. IKS prioritizes investments in education and healthcare. The goal of education isn't just to share knowledge, but to encourage logical thinking and the development of valuable skills. As our Vedas state, "Arth kari sa Vidya" means education is about equipping people with the skills they need to earn a living and contribute to a sustainable society. Our education policy has also stressed the importance of vocational training to boost employability and create a more cohesive community.

Ancient Indians believed the body to be the primary tool for leading a satisfying life by performing the right duties to achieve Purushartha. Therefore, health was viewed as an essential part of life, and according to Charaka, Ayurveda should be studied and practiced by everyone in society. We prioritize the health and wellness of our mind, body, and soul. Today, we celebrate World Yoga Day on June 21. During the pandemic, we were among the least affected regions, thanks to our food habits rooted in indigenous traditions. We use various spices in our daily meals, such as Tulsi, Neem, Turmeric, cumin, black pepper, and others, which also act as medicine. We are incorporating millet into our diet and promoting yoga and meditation to support psychological well-being.

India has a long civilizational history with a rich body of knowledge and experience that has developed within its society over time. This knowledge is captured through various literary works due to the diversity of people and issues discussed in the Puranic Repositories. Stories such as Panchatantra Ki Katha, Upanishads, and epics like Ramayan and Mahabharata serve as sources of knowledge about responsibilities toward family, society, and dharma, which remain relevant across all ages in Indian tradition. These stories are primarily taught to children so they can absorb these ideas, values, and principles. At the same time, young people can apply this wisdom throughout their lives in the present scenario. The Geeta is a source of knowledge that enriches us with life skills and understanding.

IKS AND SOCIAL SUSTAINABILITY

An ideal society is based on values and inclusivity, regardless of caste, color, or gender. Our ancient society was organized around occupations. The Ramayana narrates the story of King Rama's respect for Shabri and Khatik. Our Indian knowledge system includes all the Vedas, Vedangas, Puranas, and more. From various sources, we learn that our society was founded on gender equality and inclusivity. Women scholars like Gargi Vachaknav, Maitreyi, Nalayini, Savitri, Kaikeyi, Sita, Mandodari, and Ahalya played essential roles in spreading knowledge. As Manu 3-56 states, "Where women are honoured, the gods are pleased; but where they are not honoured, no sacred rite yields rewards." Our philosophers and education policymakers emphasize the importance of inclusive education at all levels to reduce inequalities by promoting international and domestic support for decent work, job creation, quality education, and universal social protection.

IKS AND ECONOMIC SUSTAINABILITY

India is a country rich in technology, arts, and crafts. Ancient India's contributions to metalworking, and more broadly to metallurgy and materials science, are notable. The country has been extracting iron, gold, and copper from its ores for centuries. Town planning and architecture are highly significant in India. We have a vibrant cultural heritage that remains evident today. The Arthashastra is one of the world's oldest treaties on economic administration, outlining detailed financial planning and the three main types of economic activity: agriculture, cattle rearing, and trade, which still play a vital role in our economy. A healthy treasury and a strong army are the two pillars that enable the ruler to control both his people and enemies. This is still reflected in the current situation of our country. Our strong army guards us against neighbouring countries. Terrorism remains the most serious global concern. The treasury supports the government in improving people's welfare and fostering national development.

INDIAN KNOWLEDGE SYSTEMS IN CONSERVING NATURE

For the Vedic people, their location offered a model that was not only economically and ecologically viable but also socially sustainable. They recognized the importance of mutual dependence and coexistence with nature and other living beings, as evidenced by the numerous hymns in the Rigveda that address various aspects of nature. Humans and nature have a strong, mutually dependent relationship. This is reflected in the Vedic concept of living sustainably, where entities and non-living entities are also connected in a state of mutual dependence. Our ancestral wisdom and daily practices seem to have grasped this concept and respected it. Numerous references convey the idea. For example, as we already saw in Santi Sukta, the well-being of both living entities and the natural world is emphasized.

For the Vedic people, the Sun, Moon, stars, planets, comets, and other natural elements were revered, as well as the flora and fauna around them. They also held the forests, deserts, rivers, seas, and oceans in high regard, along with mountains and more. The Vedic people understood the importance of living in harmony with nature and other living things. However, today's world faces many challenges, including natural disasters, famine, floods, and mass migration, mainly due to the overuse of resources. As a result, the world has come to recognize the need to preserve nature. To address this, the government has put in place the National Action Plan on Climate Change (NAPCC), which provides a comprehensive policy framework for all climate actions. This plan includes eight core missions focused on specific areas, such as solar energy, energy efficiency, sustainable habitats, water, ecosystem sustainability, Green India, sustainable agriculture, and strategic knowledge for climate change. Additionally, the National Clean Air Programme (NCAP) is a nationwide strategy to reduce air pollution levels across the country. These action plans focus on city-specific short-term, medium-term, and long-term actions to control air pollution from sources like vehicle emissions, road dust, biomass burning, crop burning, garbage burning, municipal solid waste burning, landfills, construction activities, and industrial emissions. Environmental studies have also become part of the curriculum, helping to raise awareness among students about the importance of living in harmony with nature. Now, we're embracing the concept of “Living in harmony with Nature."

INDIGENOUS KNOWLEDGE AND DISASTER RISK REDUCTION

India's ancient town planning practices were incredibly systematic, complete with community halls and plenty of water reservoirs within cities. You can see this same systematic approach in action in places like Jaipur, Bikaner, and Kuch, where people have long been harvesting rainwater. Nowadays, we're teaching people how to harvest water to combat scarcity and build dams for irrigation. Composed by the sage Shukracharya, the Manusmriti covers subjects like statecraft, military organization, and the importance of forts and firearms in Chapter 7. The Puranas, including the Agni Purana, Brahma

Purana, and Brahmanda Purana, also delve into diplomacy and warfare. There's been a push to "Indianize" the Indian military, with Prime Minister Narendra Modi stressing greater indigenization at the 2021 Combined Commanders Conference in Kevadia, Gujarat. The efforts of Chanakya to unite the country are reflected in our government's current slogan, "Ek Bharat Shrestha Bharat."

CONCLUSION

Looking at the four pillars of sustainability — environmental, economic, social, and human —IKS and NEP 2020 work together to promote a comprehensive approach to development. By backing traditional farming methods that protect the environment and teaching yoga and value-based education to support mental well-being, this partnership creates opportunities for inclusive, resilient, and future-ready communities. To achieve sustainable change, we need more than just policies; active participation is key. Educators should focus on hands-on, context-driven learning; institutions need to invest in training and development; and society must acknowledge the value of ancient wisdom in shaping modern progress. As India rethinks its educational principles, it's well-positioned to lead not only in innovation but also in sustainable thinking.

Ancient knowledge is the accrued knowledge over several generations and preserved in formal and informal means. Sadly, ancient Indian knowledge has been relegated to millions of palm manuscripts scattered throughout the country, gathering dust. Although several scholars are working to bring the hidden knowledge from these manuscripts to light through research and republishing, the effort does not yet match the scale needed to make a meaningful impact. On the other hand, the oral tradition. Some rural pockets are at risk of becoming extinct due to a lack of patronage. The question in front of us is, ‘’Does any society need to preserve, protect, and pass on the ancient knowledge to the future generation? The thinking pattern and the repository of knowledge created by the forefathers in any society enabled the current generation to understand the thought process and framework of the previous generation. It will allow them to analyze received wisdom in a contemporary context, identifying new opportunities to assimilate accumulated wisdom and synthesize new knowledge. Therefore, keeping the current generation in the dark about the contribution of the ancestors is an inefficient and outdated option for society. Ancient knowledge serves multiple roles in society. The ancient knowledge brought to society is the identity it provides to fellow members of the society. The social practices and norms have continuity as most of them are transmitted from one generation to another through practices and supporting knowledge. Culture has several dimensions. In a direct sense, it is the manifestation of human intellectual achievement, regarded as a collectively by society over time. Knowledge and innovation are on a continuum. If the underlying knowledge system is abruptly withdrawn from society, the culture will be jolted. New knowledge creation in any society is path-

dependent. When society loses the benefits of prior knowledge and thought processes, it will lead to reinventing the wheel, making innovation and new knowledge creation inefficient. In this contest, ancient knowledge plays a valuable role in received wisdom, providing a head start to a society that can march on the highway of innovation and new knowledge creation. The compelling argument in support of the ancient knowledge system's vast potential for economic value is underscored by the emerging world order's greater emphasis on a knowledge society. The prevailing military power will give way to knowledge. Power and such notions that demonstrate the superiority of the knowledge tradition are bound to lead the rest of the world. Transforming knowledge into economic value has been fully formalized with the global intellectual property rights regulation and patent law. Therefore, the ancient knowledge system will be beneficial to a country like India and lead to the sustainable development of the nation.

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